Getting Started

All you need for this tutorial is

- a **Python 3.5+ Interpreter** together with the python packages **jupyter, numpy, scipy, pandas and matplotlib**
- the material of this tutorial (https://github.com/padas-pub/python-tutorials) in form of jupyter notebook files (.ipynb)

1. Set up a Python Interpreter

The easiest way to set up a working python environment is by installing Anaconda - a bundle consisting of the Python interpreter, pre-compiled packages, tools for handling virtual environments, package management, etc.

1.1 Install Anaconda

Please follow the installation steps according to your operating system.

For Linux users

Click and download the Anaconda installer for Linux. (https://www.anaconda.com/download/).

Choose version **3.5 or higher**.

Open your terminal and type the following command

```
$ bash ~/Downloads/Anaconda3-4.2.0-Linux-x86_64.sh
```

Change ~/Downloads with your actual path and Anaconda3-4.2.0-Linux-x86_64.sh with your actual file name. After installing anaconda successfully run the following command in your terminal:

```
export PATH="~/anaconda3/bin:$PATH"
```

Run in your command line:

```
nano ~/.bashrc
```

Add the following line:

```
export PATH=~/anaconda3/bin:$PATH
```

Save and close the editor.

Finally, close and re-open your terminal so the changes can take effect.

You can check your installation by typing conda "list command" in your terminal. If anaconda is susccessfully installed this command will display a list of installed packages.

For Windows users

Click and download the Anaconda installer for Windows. (https://www.anaconda.com/download/)

Choose version **3.5 or higher**.

Double click the Anaconda installer and follow the prompts.

You can check your installation by typing conda "list command" in your Command Prompt. If anaconda is successfully installed this command will display a list of installed packages.

For OS X users

Click and download the Anaconda installer for OS X. (https://www.anaconda.com/download/)

Download the command line installer for Anaconda with Python **3.5 or higher**.

Run the following command line:

```
$ bash ~/Downloads/Anaconda3-4.2.0-MacOSX-x86_64.sh
```

Change ~/Downloads with your actual path and Anaconda3-4.2.0-MacOSX-x86_64.sh with your actual file name.

If your installation is successfull , the message “Installation finished.” will be displayed.

1.2 Use Anaconda

Launch Anaconda

You can run anaconda navigator via the following command line:

```
$ anaconda-navigator
```

You can run the **jupyter notebook** via the following command line:

```
$ jupyter notebook
```

Install package

To install a package, open your terminal window and type the following command to install for example the "atlas" package:

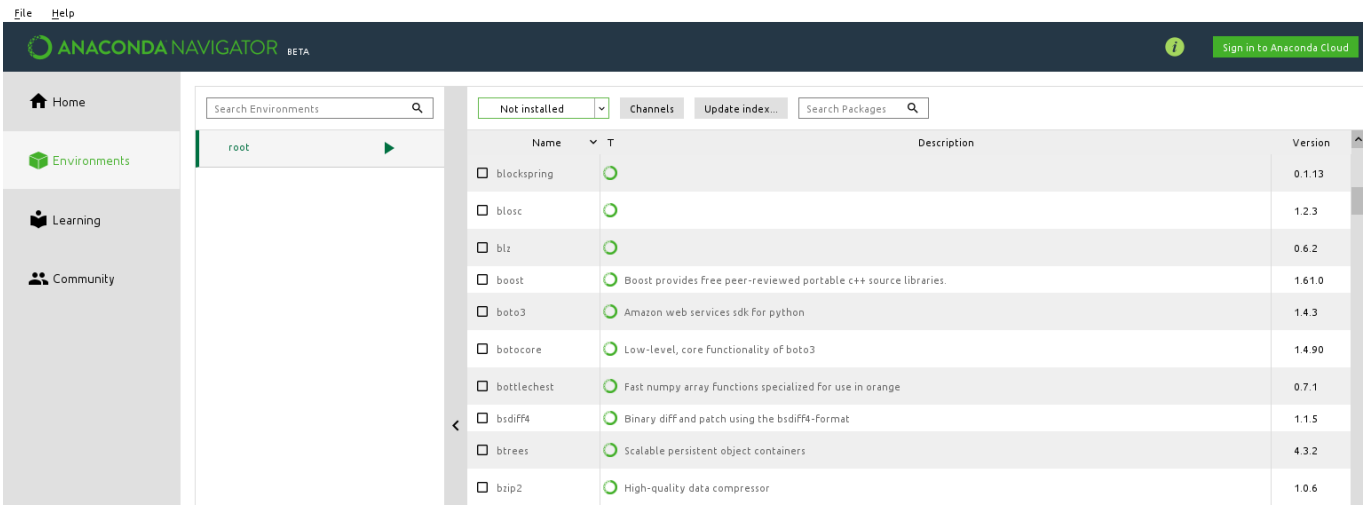
```
$ conda update conda
```

```
$ conda install atlas
```

Or you can launch the Anaconda Navigator with the command line:

```
$ anaconda-navigator
```

The graphic interface of anaconda navigator will appear. Go to the environments in the left side and choose not installed and you will get this interface.



Check any package you want, hit apply which will appear in the bottom and then accept the installation of the new package.

Update package

To update a package, open your terminal window and type the following command to update for example the "atlas" package:

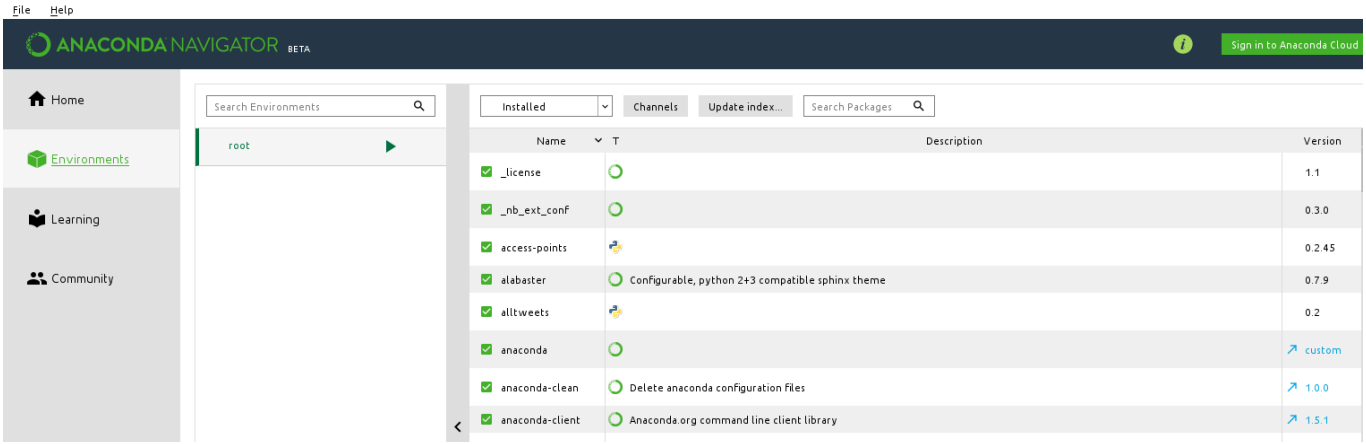
```
$ conda update conda
```

```
$ conda update atlas
```

Or you can launch the Anaconda Navigator with the command line:

```
$ anaconda-navigator
```

The graphic interface of anaconda navigator will appear. Go to the environments in the left side and you will get this interface. Click on the blue arrow corresponding to the chosen package and then hit apply which is in the bottom and then hit ok.



1.3 Install Anaconda Environment

You can extract the list of installed packages via this command line:

```
$ conda list -e > req.txt
```

You can install the environment requirement file

```
$ conda create -n new environment --file req.txt
```

1.4 Reference

http://docs.anaconda.com/anaconda/install/ (http://docs.anaconda.com/anaconda/install/)

2. Clone Repository

Install git

For Linux users

Use this command to download git in case you don't have it on your system

```
$ apt-get install git
```

For Windows users

Download git program from this website (http://msysgit.github.io).

Install the downloaded program.

For OS X

Download the graphic installer from this link (http://sourceforge.net/projects/git-osx-installer/)

Clone git repository

For Windows users

Create a Git bash with a right click on the mouse

Run the following command in the git terminal to clone the python-tutorials repository:

```
$ git clone https://github.com/padas-pub/python-tutorials.git
```

For Linux and OS X users

Run the following command in the git terminal in order to clone the python-tutorials repository:

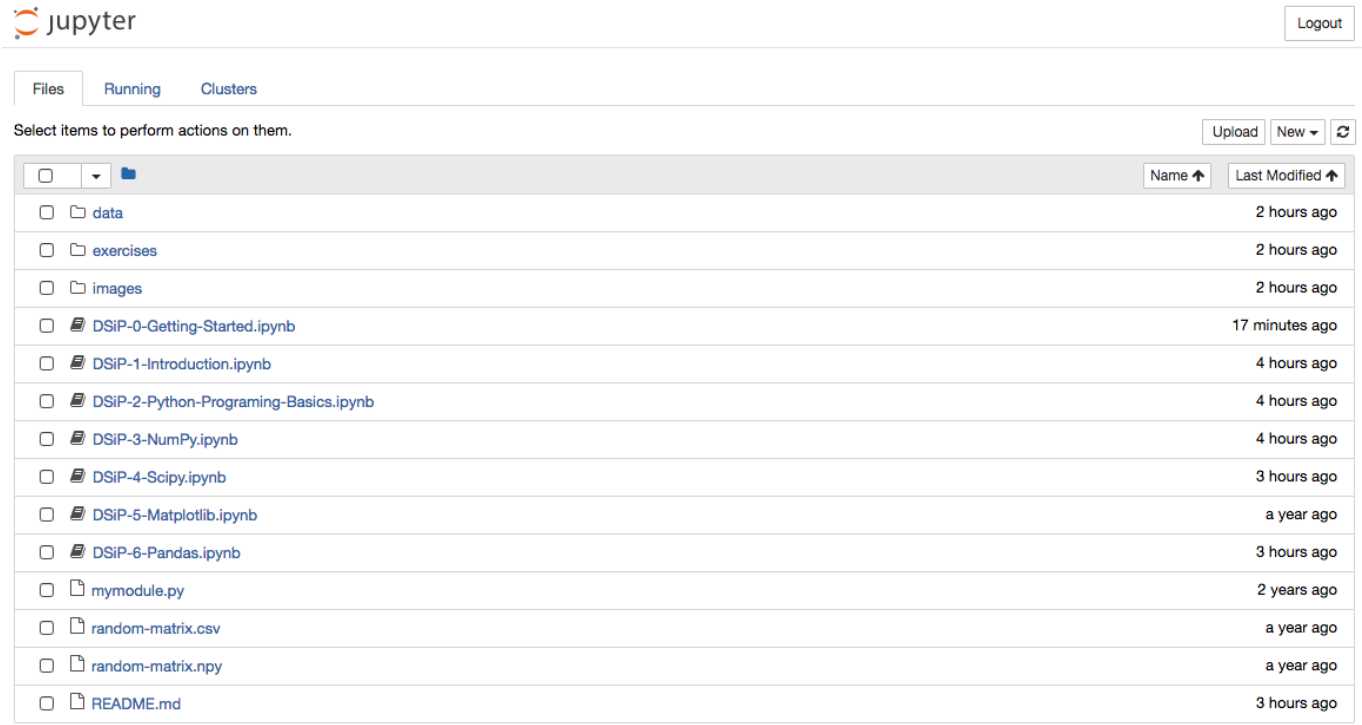
```
$ git clone https://github.com/padas-pub/python-tutorials.git
```

3. Execute Python code in Jupyter noteboks

Navigate to your local python-tutorials folder and run jupyter notebook via this command:

```
$ jupyter notebook
```

Then a browser window should open, showing the content of your local python-tutorials folder.



In order to execute a cell in a jupyter notebook, just hit **Shift + Enter** or **Ctrl + Enter**.